

STATE OF ILLINOIS

ILLINOIS COMMERCE COMMISSION

ILLINOIS INDEPENDENT TELEPHONE)	
ASSOCIATION)	
)	
)	
Petition for initiation of an investigation of)	Docket No. 00-0233
the necessity of and the establishment of a)	
Universal Service Support Fund in accordance)	
in accordance with Section 13-301(d) of The)	
Public Utilities Act.)	
)	
)	
ILLINOIS COMMERCE COMMISSION)	
On Its Own Motion)	
)	
Investigation into the necessity of and, if)	Docket No. 00-0335
appropriate, the establishment of a universal)	
support fund pursuant to Section 13-301(d) of)	
The Public Utilities Act.)	

DIRECT TESTIMONY

OF

ROBERT C. SCHOONMAKER

ON BEHALF OF

THE ILLINOIS INDEPENDENT TELEPHONE ASSOCIATION

March 23, 2001

1 Q. Please state your name and business address.

2 A. My name is Robert C. Schoonmaker, and my business address is P. O. Box
3 25969, Colorado Springs, Colorado 80936.

4

5 Q. By whom are you employed and in what capacity?

6 A. I am a Vice President of GVNW Consulting, Inc., a consulting firm specializing
7 in working with small telephone companies.

8

9 Q. Would you please outline your educational background and business experience.

10 A. I obtained my Masters of Accountancy degree from Brigham Young University in
11 1973 and joined GTE Corporation in June of that year. After serving in several
12 positions in the revenue and accounting areas of GTE Service Corporation and
13 General Telephone of Illinois, I was appointed Director of Revenue and Earnings
14 of General Telephone Company of Illinois in May, 1977 and continued in that
15 position until March, 1981. In September, 1980, I also assumed the same
16 responsibilities for General Telephone Company of Wisconsin. In March, 1981, I
17 was appointed Director of General Telephone Company of Michigan and in
18 August, 1981 was elected Controller of that company and General Telephone
19 Company of Indiana, Inc. In May, 1982, I was elected Vice President-Revenue
20 Requirements of General Telephone Company of the Midwest. In July, 1984, I
21 assumed the position of Regional Manager of GVNW Inc./Management (the
22 predecessor company to GVNW Consulting, Inc.) and was later promoted to my
23 present position of Vice President. I have served in this position since that time

24 except for the period between December, 1988 and November, 1989 when I left
25 GVNW to serve as Vice President-Finance of Fidelity and Bourbeuse Telephone
26 Companies.

27

28 Q. What are your responsibilities in your present position?

29 A. In my current position, I consult with independent telephone companies and
30 provide financial analysis and management advice in areas of concern to these
31 companies. Specific activities which I perform for client companies include
32 regulatory analysis, consultation on regulatory policy, financial analysis, business
33 planning, rate design and tariff matters, interconnection agreement analysis, and
34 general management consulting.

35

36 Q. Have you previously testified in regulatory proceedings?

37 A. Yes, I have testified on regulatory policy, local competition, rate design,
38 accounting, compensation, tariff, interconnection agreements, universal service,
39 and separations related issues before the Illinois Commerce Commission, the
40 Public Service Commission of Wisconsin, the Michigan Public Service
41 Commission, the Iowa Utilities Board, the Tennessee Public Service Commission,
42 the New Mexico Public Regulation Commission, and the Missouri Public Service
43 Commission. In addition, I have filed written comments on behalf of our firm on
44 a number of issues with the Federal Communications Commission (FCC) and
45 have testified before the Federal-State Joint Board (Joint Board) in CC Docket
46 #96-45 on universal service issues. In July, 1998 I was appointed by the FCC to

47 serve on the Rural Task Force to make recommendations to the FCC-State Joint
48 Board in CC Docket #96-45 on USF issues for rural companies.

49

50 Q. Who are you representing in this proceeding?

51 A. I am representing the Illinois Independent Telephone Association ("IITA") and its
52 member companies. The analysis I will be presented in this testimony will be for
53 most eligible small Illinois telephone companies, a few of whom are not members
54 of the IITA. Grandview Mutual, a very small company who is eligible for funding
55 under the statute, has not provided the necessary information in order to be
56 included at this point in time within the analysis that I will be presenting in this
57 testimony.

58

59 Q. Did you submit testimony in Phase 1 of these dockets on behalf of the IITA?

60 A. Yes, I did. That testimony was introduced into evidence as IITA Exhibit #1 and
61 had six Attachments. In this testimony, I will be referencing IITA Exhibit #1,
62 Attachment #2, which is the HAI Model Description manual developed by the
63 model developers, and IITA Exhibit #1, Attachment #3, which is the HAI Inputs
64 Portfolio developed by the model developers. Those documents have previously
65 been admitted into the record.

66

67 Q. What is the purpose of your testimony?

68 A. I will be presenting proposals of the IITA to establish an Illinois Universal
69 Service Fund ("IUSF") under the provisions of Section 13-301(d) of The Public

70 Utilities Act ("PUA"). Section 13-301(d) gives the Commission the authority to
71 establish an IUSF for those carriers who currently receive DEM and IUSF support
72 pursuant to previous Commission Orders. I describe the specific provisions of the
73 statute later in more detail in my testimony.

74
75 Q. Is there an urgency to complete this proceeding in an expeditious manner?

76 A. There is. The Order On Reopening issued by the Commission in Docket No. 98-
77 0679 on December 20, 2000 that extended the Illinois DEM Weighting Fund calls
78 for that Fund to be terminated by September 30, 2001. Support funds that the 29
79 small companies in the state have received from this Fund will be terminated. If
80 these funds are not replaced, many of these companies will suffer substantial
81 financial harm and may have to seek increases in end user rates to offset the loss
82 of these funds. It is important that the Commission conclude these proceedings in
83 sufficient time before the termination of the DEM Weighting Fund so that a new
84 proposed Fund can be established and provide for a continuity of support funding.

85
86 Q. Please comment on the scope of the testimony being filed today and the filings
87 that will be made on April 20, 2001.

88 A. This testimony is submitted on behalf of the IITA. In it, I will be presenting
89 evidence regarding the IITA's position concerning the need for, and the
90 establishment of, an IUSF and will be addressing statutory requirements of
91 Section 13-301(d). I will also address other interrelated issues regarding potential
92 regulatory changes that could impact the IITA member companies and which will

93 need to be addressed in these dockets in connection with the IUSF fund, or in
94 some other manner, on an expedited basis.

95 On April 20, 2001, individual companies (not the IITA) who choose to seek IUSF
96 support will be submitting information and testimony with regard to the
97 simplified rate-of-return analysis and supplying the information requested by
98 Staff. The rate-of-return analysis will be based on year 2000 results with much of
99 the information to come from each company's Form 23A that is due to be filed
100 April 2, 2001 or other suitable annual financial reports acceptable to the
101 Commission. Those analyses have not yet been completed and neither the
102 individual results nor the collective results (which would size the fund) are known
103 at this time. However, based on a partial analysis of only certain companies using
104 1999 data, it is my present belief that the final size of any fund established for the
105 next year will likely be no more than, and probably less than, the current total
106 Illinois High Cost Fund and DEM Weighting Fund.

107 I intend to submit testimony on April 20, 2001 that will aggregate the results of
108 the individual company filings so as to size the fund. Depending upon the results
109 of the individual company rate-of-return filings, the IITA may be making
110 additional recommendations and proposals in that set of testimony.

111
112 **STATUTORY BACKGROUND**
113

114 Q. Please summarize the significant statutory provisions that are relevant to the
115 establishment of the IUSF you are proposing?

116 A. Section 13-301(d) states that the Commission shall investigate the necessity of,
117 and if appropriate, establish a universal service fund for those carriers who
118 currently receive funding pursuant to the Commission's Twenty-Seventh Interim
119 Order in Docket No. 83-0142 or the Commission's Orders in Docket Nos. 97-
120 0621 and 98-0679. The statute further details the Commission's obligations in
121 establishing a universal service fund.

122

123 Q. Please provide a brief background of the Commission Orders cited in Section 13-
124 301(d) of the PUA.

125 A. The Twenty-Seventh Interim Order in Docket No. 83-0142 established the High
126 Cost Illinois Universal Service Fund (IUSF). The establishment of the IUSF was
127 part of the Commission's ongoing efforts to shift non-traffic sensitive ("NTS")
128 plant costs out of per minute access charges while mitigating the impact on end
129 users. The IUSF was contemplated in the Fourth Interim Order when the
130 Commission authorized a shift in intrastate carrier common line charges to
131 subscriber line charges over a five year period. The Commission recognized at
132 that time that an IUSF would need to be established in order to reduce the amount
133 of NTS costs shifted to end users. Specifically, the Twenty-Seventh Interim
134 Order states that:

135 "The purpose of the IUSF is to mitigate the impact the complete phase out
136 of intrastate NTS costs from interexchange carrier common line charges
137 has on LEC costs which, because of their cost characteristics and size,
138 have few short term alternatives to generate revenue sufficient to recover
139 all such transferred NTS costs other than through significant end user
140 increases." (Twenty-Seventh Interim Order, Docket No. 83-0142, p.2.)
141

Attached as IITA Exhibit #2, Attachment #1, is a list of carriers who currently receive support from the IUSF and the amounts they received in the year 2000. The Order in Docket No. 97-0621 approved a Stipulation establishing a 1998 Dial Equipment Minutes of Use ("DEM") Weighting Fund. The establishment of a DEM Weighting Fund was necessitated by the FCC's decision to shift federal DEM support from per-minute access rates to an explicit federal fund and the fact that this shift in federal support caused a corresponding decrease in intrastate access charges because of the ICC's mirroring policy. With lower federal access charges to mirror on the intrastate level, independent LECs would have experienced a large decrease in intrastate revenues unless an intrastate DEM Weighting Fund was established. The Stipulation was a one year agreement whereby the Funding Carriers; i.e., GTE, ICTC, Consolidated Communications, MCI, Sprint, Centel, Frontier International, Frontier Services and HTC Communications, agreed to a level of DEM funding that would be received by the companies represented by the IITA. The Order in Docket No. 98-0679, through an approval of a new Stipulation between the Parties listed above, extended the DEM Weighting Fund at a lower level of support until December 31, 2000. Pursuant to the previously mentioned Commission Order On Reopening issued on December 20, 2000, the Fund was extended for an additional period to end no later than September 30, 2001. Attached as IITA Exhibit #2, Attachment #2, is a list of the LECs who currently receive intrastate DEM support and the amount that they received in 2000 pursuant to the Stipulation then in effect. Data for 2000 is presented because it is the last full year that the DEM Weighting Fund

will be in effect and because the rate-of-return analysis will be based on year 2000 results.

Q. Could you comment briefly on the impact of losing the support levels that are shown on Attachment #1 and Attachment #2.

A. Yes. The impacts would be significant, even severe, to both the companies and their customers. As can be seen from the Attachments, on average, the small ILECs receive \$9.59 per month per customer in support from these Funds. On an individual company basis, the amount of support varies widely based on individual company circumstances but ranges to levels in excess of \$50.00 per month per customer. The bulk of this support comes from the DEM Weighting Fund. Should this funding be lost, individual companies will need to increase rates. These local rate increases would need to be substantial for many companies (and in some cases massive) in order to allow the individual companies to continue to provide service to their customers and meet existing loan obligations. The impacts shown on these Attachments demonstrate why it is so vital for the Commission to reach a decision in these dockets before September 30, 2001 so companies will not suffer the financial losses associated with the termination of the DEM Weighting Fund.

Q. Based on your understanding of the statute and the Orders you just summarized, who would be eligible to receive universal service support if the Commission were to establish an IUSF fund pursuant to Section 13-301(d) of the PUA?

188 A. The carriers who would be eligible to receive support would be those carriers who
189 currently receive IUSF or DEM support as listed on Attachments #1 and #2.

190

191 Q. What findings must the Commission make pursuant to Section 13-301(d) (and
192 implicitly 13-301(e)) prior to establishing an IUSF?

193 A. Prior to establishing an IUSF, the Commission must:

- 194 • define the group of supported telecommunications services that include
195 universal service, including at a minimum those services as defined by the
196 FCC;
- 197 • identify the ILECs' economic cost of providing the supported services;
- 198 • establish an affordable price, which shall be no less than the existing rates
199 of the supported services;
- 200 • identify support to be provided taking into account any federal universal
201 service support received for providing the same services;
- 202 • identify all implicit subsidies contained in rates or charges of ILECs,
203 including interexchange access charges, and determine how such funds
204 can be made explicit by the creation of the fund;
- 205 • require that all costs of the fund be recovered from all local exchange and
206 interexchange carriers certificated in Illinois on a competitively neutral
207 and nondiscriminatory basis; and
- 208 • not permit universal service support cost recovery from another
209 certificated carrier for any service purchased and used solely as an input to
210 a service provided to such certificated carrier's retail customers.

211

212 Q. Does your testimony address each of the Commission's obligations listed above.

213 A. Yes, it does.

214

215 **SUPPORTED SERVICES**

216

217 Q. Section 13-301(e)(1) calls for the Commission to identify the services that should
218 be supported by the IUSF. What are your recommendations in this regard?

219

220 A. This section of the statute requires the Commission to include, at a minimum, all
221 the federally supported services as services that should similarly be supported by
222 an IUSF. In addition, this section allows the Commission to review existing
223 services and rate structures and the needs of Illinois consumers and to add
224 additional services beyond the federally supported services that it believes are
225 appropriate. We recommend that the Commission adopt the FCC list of
226 supported services at the present time. We make this recommendation both in
227 view of the limited time in which the Commission has to complete this
228 proceeding and because the IITA has no additional services that it would propose
229 to add to the list at this time.

230

231

232

233 Q. What services do the FCC include in the list of supported services?

234 A. These services are contained in Part 54.101 of the FCC's Rules and include:

- 235 1. Voice grade access to the public switched network
- 236 2. Local usage
- 237 3. Dual tone multi-frequency signaling or its equivalent
- 238 4. Single-party service or its functional equivalent
- 239 5. Access to emergency services
- 240 6. Access to operator services
- 241 7. Access to interexchange service
- 242 8. Access to directory assistance

243 9. Toll control services for qualifying low-income consumers

244

245 Q. Are these the services that the IITA proposes be the supported services?

246 A. Yes. I would note that the FCC has yet to identify the amount of local usage that
247 should be supported.

248

249 **DEVELOPING ECONOMIC COSTS**

250

251 Q. In developing the cost of providing the supported services, does the IITA feel that
252 the identification of "economic costs" is the best way of developing these costs?

253 A. Generally, the IITA members would prefer that the cost of providing these
254 services be based on historical embedded costs, rather than forward-looking
255 economic costs. The historical embedded costs of the company represent the
256 actual investments and expenses that the company has and is incurring in order to
257 provide the supported services. They are based on factual, rather than
258 hypothetical, costs. Further, they represent the costs of providing the actual
259 network and service quality that is in place as opposed to a hypothetical network
260 and a perceived hypothetical service quality associated with that network. The
261 IITA believes any recovery mechanism applied to a small company, whether it is
262 used to establish universal service funding or to establish rates at large, is most
263 appropriately based on the actual costs of the company and not the estimated costs
264 hypothesized by a theoretical cost model. We believe that use of actual costs is
265 the best way to ensure that revenues available to IITA member companies are
266 sufficient and predictable enough to sustain and foster telecommunications
267 investments and to provide service to their customers. This is particularly true in

268 light of the Commission's requirement (Section 13-301(d) imposes no such
269 requirement) that the companies demonstrate a need for IUSF funding based on
270 their earnings on an embedded cost basis.

271 Nevertheless, the IITA recognizes that state statutes (Section 13-301(d))
272 specifically require the use of "economic costs" and have undertaken an effort to
273 develop those costs using tools readily available in the industry.

274

275 Q. In the development of costs that you present, have you developed individual cost
276 studies for each IITA member?

277 A. Yes and no. The studies I will be presenting are calculated at an individual
278 company level and from that standpoint can be considered individual company
279 studies. However, many of the inputs used in calculating the individual company
280 results are national or statewide input factors and do not necessarily reflect an
281 individual company's forward-looking costs. For this reason, the studies may also
282 be considered as "proxy" cost studies rather than individual company cost studies.

283

284 Q. Within the scope of the statutes, are there provisions for the use of proxy cost
285 studies?

286 A. Yes. Section 13-301(d) states:

287 "In establishing any such universal service support fund, the Commission
288 shall, in addition to the determination of costs for supported services,
289 consider and make findings pursuant to paragraphs (1), (2) and (4) of item
290 (e) of this Section. Proxy cost, as determined by the Commission, may be
291 used for this purpose."
292

The IITA believes this gives the Commission substantial latitude in reviewing and approving cost studies presented to it by small LECs to support compliance with IUSF requirements. While the studies I am presenting are calculated on an individual company basis, they rely on proxy input values that are consistently applied to all companies though they may not specifically reflect the forward-looking costs of each individual company. In addition, because of the techniques used in the models to determine serving areas, access lines and the costs for network elements based on averaged inputs, the studies, at a very granular level such as the individual wire center or small company level, may not very accurately represent the costs of that company. In order to fully account for these deficiencies in the model, the IITA believes it is appropriate to consider the group of small companies in the aggregate as a proxy for the group and for its individual members. An analysis based on the group of companies as a whole, we believe, is within the scope of the statute regarding proxy cost studies. Furthermore, because of the deficiencies in the model, we would contend that it is not only within the scope of the statute but a more appropriate measure of the statutory tests than are the individual company results.

Q. Why are you presenting individual cost study results in addition to the combined company results for the Commission's consideration in meeting the statutory criteria?

A. Pursuant to the concerns expressed in the Commission's November 21, 2000 First Interim Order in these dockets that individual company cost study results were not

presented in testimony in that phase of the case, individual cost study results for each company are presented. However, results for all the small Illinois companies combined are also presented for consideration under the proxy cost provisions of the statute. Because of the limitations of the forward-looking cost studies for small telephone companies which I briefly discussed in my prior answer and which I will more fully explain hereafter, the IITA recommends that the Commission consider the costs for the group of companies as a whole as a proxy cost for each individual company in the event the company would not qualify for funding based on an individual company's cost study.

Q. Since you are presenting studies in this testimony which are at least partially in the nature of proxy cost studies, would it be appropriate for an individual company to present a company-specific cost study for consideration by the Commission?

A. Certainly. If an individual company has specific cost circumstances that it feels are not adequately addressed by the studies based on proxy input values, it would be entirely appropriate for the Commission to consider an individual cost study presented by a company. Inherently, the models currently available to assess economic costs are theoretical tools that produce results which may or may not produce results reflective of individual circumstances. The IITA has chosen to use the HAI model with a consistent set of input values for all the companies in an effort to minimize the costs of developing studies, and hopefully, minimize the controversy that needs to be addressed by the Parties and the Commission in this

proceeding. However, the IITA, in no way, means to limit the ability of individual companies to file individual company cost studies now or in the future.

Q. In preparing to develop economic cost studies for IITA members, what steps did you go through in reviewing alternatives for developing these studies?

A. During 1999, in recognition of the statutory requirements to develop economic costs, several IITA members requested GVNW to review available alternatives to develop such costs. Studies were performed for these companies using three alternative models that were available for use by small companies. An evaluation of these models was made for each of the companies. Results of each model were provided to the companies; and an overall evaluation on the ease of use, production of necessary results and acceptability of the models were made. After reviewing the three available models, GVNW recommended to these companies and to the IITA members at large that the HAI Model 5.0a be used as the model tool, with appropriate adjustments to certain of the model inputs.

Q. Can you comment briefly on the two models that were not chosen.

A. Yes. The first was the Benchmark Cost Proxy Model ("BCPM") sponsored by Sprint and U.S. West before the FCC in its universal service docket and in many state proceedings. While the BCPM Model is generally supported by ILECs around the country, and in my judgment, produces a more appropriate representation of loop costs, GVNW felt that use of this model would make it more difficult to obtain results for individual access elements since this model

362 does not have built-in formats for developing costs at the access element level.

363 We also recognized that use of the HAI Model, supported by IXC parties to the

364 proceeding, might reduce the level of controversy regarding the model used to

365 develop economic costs. For these reasons, we recommended the HAI Model

366 rather than the BCPM Model.

367 The second model was a model developed by Parrish Blessing and Associates.

368 This model has not been presented to the FCC but has been used in some state

369 proceedings. The model is less sophisticated internally than the HAI and BCPM

370 Models and relies heavily on the use of individual company engineering studies to

371 develop inputs to the model. The development of these inputs is a fairly

372 expensive and laborious process. Simply put, we were concerned about the ability

373 of small companies to conduct such supporting studies and the costs associated

374 with developing inputs to use in conjunction with this model. We were also

375 concerned about the additional controversy that might surround its use since it has

376 not had the same scrutiny as the other models, and thus, we recommended against

377 using this model at this time.

378

379 Q. Did the HAI Model generally produce the highest results of the three models?

380 A. No. Using the HAI default assumptions, the HAI Model generally produced the

381 lowest cost estimates of the three models that were considered.

382

383 Q. Did you consider using the FCC's Synthesis Model as a possible alternative?

384 A. Yes, it was considered for this phase of the proceeding. There were two
385 significant differences between the Synthesis Model and the HAI Model that
386 caused me not to choose the Synthesis Model. In developing costs for interstate
387 USF purposes, the FCC modified the treatment of Network Operating Expenses,
388 Customer Operations Expenses and Corporate Operations Expenses in the HAI
389 modules so these cost inputs are hard coded into the program and are accumulated
390 in the Network Interface Device cost element. Thus, if one uses the Synthesis
391 Model, all of these major expenses would be allocated to the loop cost element
392 and none would be allocated to the access cost elements that must be considered
393 in this proceeding pursuant to a statute. That is sufficient reason to reject the use
394 of the Synthesis Model. Another reason for not using this model is the cost of
395 doing so. While the model and its underlying data have been made available for a
396 nominal fee for use in the FCC's USF docket, the license agreement specifically
397 prohibits the use of the underlying data in a state proceeding without paying a per
398 company fee for the use of the data for state proceedings. Use of the data in a
399 state proceeding would require the payment of tens of thousands of dollars for the
400 small companies.

401

402 Q. Can you briefly summarize the reasons why you have chosen to develop the
403 economic costs presented in this case using the HAI Model.

404 A. Yes. First, the model has been widely available throughout the industry and has
405 been carefully studied by industry participants, the FCC and many state
406 Commissions. Both its strengths and weaknesses are known and have been

407 evaluated. Second, the parties most likely to have concerns about this proceeding
408 are the interexchange carriers--the supporters of the HAI Model. By using the
409 HAI Model, we hoped to minimize the controversy in this proceeding, thus
410 making it possible for the Commission to conclude the proceeding in a timely
411 manner. Third, the HAI Model produced results in formats that are readily
412 available to identify both the cost of universal service and the cost of individual
413 access cost elements. Fourth, because the model includes default input values
414 necessary to produce cost results for each company, the cost of developing
415 appropriate, or at least acceptable, cost inputs to run the model are minimized.
416 Fifth, by reviewing and modifying a relatively small number of inputs, we felt we
417 could develop adequate estimates of economic costs to satisfy the statutory
418 requirements.

419
420 Q. Do you have any misgivings or concerns about using the HAI Model to develop
421 economic costs for the IITA members?

422 A. In spite of the fact that I recommended to the IITA members that they use this tool
423 as the best available to develop the costs they needed to for this proceeding, I
424 have concerns about the validity of the results of the HAI Model I am presenting.
425 These concerns include:

426 1) A number of general concerns about using proxy cost model tools to
427 develop "economic costs" as opposed to using actual embedded costs of
428 the company. One of the concerns in this regard is the potential
429 discontinuity between using "economic costs" for developing the costs of

certain access elements, for example, while using historical costs to develop an overall company revenue requirement.

2) A lack of sufficient time and resources to fully explore all the proposed default inputs. While I proposed a number of changes to these inputs, there are others, such as the cost of cable and digital loop carrier equipment, that we have not had time to test against the forward-looking costs of such items for small companies in Illinois. I am concerned that the costs may not reflect the economic costs of the companies in all respects.

3) A general concern about testimony presented in other proceedings that I have reviewed has led me to the conclusion that the HAI Model tends to understate the amount of loop plant needed to build a real network.

4) A concern that the use of broad inputs and generalized formulas for all companies, rather than specific inputs for individual companies, tend to mask unique circumstances of individual companies, which cause substantial differences in costs in the real world.

5) A concern that use of models with input values that are difficult to verify and easy to manipulate may lead to the use of models to develop cost numbers that have questionable validity but may cause substantial company and customer impacts.

6) A concern that the model results for small companies from models like the HAI Model produce results that vary widely from comparable actual data and in a manner inconsistent with forward-looking costs raising

substantial questions regarding the validity of the results for individual small telephone companies. If these results are used solely on an individual company basis to specifically determine eligibility for IUSF funding, anomalies in the studies related to individual companies may result in either too much, or too little, funding for the individual companies.

- 7) A concern that results from the model are likely to be less accurate for smaller geographic areas, such as individual exchanges or small companies with a few exchanges, than they are for large companies, such as Ameritech or Verizon who have hundreds of exchanges. This concern is due both to techniques used to generate customer locations and data in the model and to a recognition that the law of averages leads to offsetting impacts between individual areas within a large group of exchanges that may not occur in a small company or a single wire center. A review of the access lines developed by the model compared to actual company lines, for example, shows significant differences on an individual company level.

Q. Is there support for your concerns in this regard in proceedings before the FCC?

A. Yes, there is. While the FCC adopted its Synthesis Model for use in developing costs for federal universal service purposes for non-rural companies, it had concerns about the validity of that model for rural companies. To more fully evaluate these models and policies regarding universal service for rural

476 companies, the FCC appointed a Rural Task Force ("RTF") consisting of 18
477 representatives of a wide variety of stakeholders in the federal USF process. The
478 RTF's unanimous recommendation, which was filed with the FCC in September,
479 2000, rejected the use of the current Synthesis Model for use for rural companies
480 for federal universal service determination. That recommendation was approved
481 unchanged by the federal Joint Board on Universal Service and is awaiting final
482 FCC action. The RTF White Paper #4, A Review of the FCC's Non-Rural
483 Universal Service Fund Method and Synthesis Model for Rural Telephone
484 Companies, provided an extensive analysis of the Synthesis Model and its use for
485 rural telephone companies. This Paper provided the factual support that led to the
486 RTF Recommendation. While that analysis was completed on the Synthesis
487 Model, rather than the HAI Model, much of the analysis and conclusions would
488 be applicable to the HAI Model as well since the Synthesis Model incorporates
489 much of the HAI Model logic. Of particular significance is this observation made
490 by the RTF on page 10 of the above-referenced White Paper.

491 "The aggregate results of this study suggest that, when viewed on an
492 individual rural wire center or individual Rural Carrier basis, the costs
493 generated by the Synthesis Model are likely to vary widely from
494 reasonable estimates of forward-looking costs. In fact, much of the data
495 analysis suggests that the model results tend to be in the high and low
496 extremes, rather than near the expected results for the area being
497 analyzed."
498
499

500 Q. Given these concerns, do you still support the economic costs that you have
501 developed?

502 A. Yes. Given the statutory requirements in Illinois and the current state of tools that
503 are available to develop such cost results at a reasonable cost to the companies, I
504 believe the costs developed are adequate representations of the economic costs of
505 these companies for meeting the statutory requirements. However, I specifically
506 have concerns about giving too much reliance to individual company results when
507 those results reflect a single exchange or only a few exchanges. I believe it is
508 incumbent on the Commission to not only review the individual company results
509 but to review and use the results of these studies for the group of companies as a
510 whole under the proxy provisions of the statutes in making its determination
511 whether the statutory requirements are being met. I believe this is particularly
512 important in light of the Commission's clear direction that ultimately the level of
513 funding should reflect company need as determined by its overall revenue
514 requirement using embedded costs.

515

516 **OVERALL DESCRIPTION OF THE HAI MODEL**

517 Q. Can you briefly describe the historical background of the HAI model.

518 A. The HAI model was initially known as the Hatfield Model, developed by Hatfield
519 Associations, a consulting firm in Colorado, at the request of AT&T. The model
520 was developed with the intent of providing a tool to develop the forward-looking
521 cost of the telephone network throughout the United States as the cost basis for
522 universal service support and to develop the estimated cost of unbundled network
523 elements ("UNEs") for interconnection proceedings under Section 252 of the
524 Telecommunications Act of 1996. As the model faced scrutiny in various state

and federal proceedings, it underwent continued development and modification through a series of versions over a several year period of time. Generally, the later versions were more sophisticated in the cost development methods and techniques than were earlier versions of the model. Version 5.0a of the model, which we are proposing to use to develop the costs presented in this proceeding, was the latest version presented in formal comments to the FCC in CC Docket #96-45, the federal USF proceeding.

Q. Can you briefly describe the overall design of the model.

A. Yes. The model is designed in several different modules that interact and are interconnected to produce the overall model results. The modules develop the costs for various network elements and for the overall cost of the firm. Modules include a module to develop the cost of distribution and feeder plant, a module for developing the cost of switching and interoffice plant, a capital cost module and an expense module. Results of all these modules are fed into a series of model output reports. A much more complete description of the model design is included in the Model Description manual developed by the model developers and included as IITA Exhibit #1, Attachment #4 to my Direct Testimony filed in Phase 1 of this proceeding.

Q. Can you briefly describe the default model inputs?

A. Yes, The HAI model has well over a thousand different user changeable model inputs, including physical equipment characteristics, cost relationships to

geographical factors, traffic characteristics, unit costs of telephone plant, costs of installing telephone plant, depreciation factors, capital costs and expense ratios. To assist users in being able to use the models quickly, the developers have populated the model with default values that based on their research, judgment and evaluation represent appropriate values for each input element. These values are known as the default input values. When running the model, the user can either use these default values or individually change as many of the values as the user believes are appropriate. IITA Exhibit #1, Attachment #5, to the Direct Testimony that I filed in the first phase of this proceeding, the HAI Inputs Portfolio, is a document developed by the model developers which describes each individual input item, the default value and the model developers' rationale and support for adopting the particular default value.

DESCRIPTION OF DEFAULT INPUT CHANGES

Q. In the cost studies you present in this testimony, have you used the default values exclusively as the input values?

A. No. While we have used the default values for a large portion of the inputs, we have not used them exclusively. Based on prior experience in other states and at the national level using the models and based on testing individual inputs in conjunction with the cost development for this case, I have modified a number of the default inputs.

570 Q. Can you make some general observations with regard to why you modified some
571 of the default inputs?

572 A. Yes. There were a variety of reasons for modifying various inputs, which I will
573 describe in detail later in this testimony. In some cases, inputs were modified to,
574 in my opinion, reflect the operation of rural companies as compared to the large
575 urban Bell Operating Companies whose operations are generally reflected in the
576 default inputs. In other cases, inputs were modified to reflect the specific
577 circumstances in Illinois rural areas as compared to the wide variety of geographic
578 conditions throughout the United States. In other cases, inputs were modified to
579 reflect judgmental differences with the HAI Model proponents regarding the
580 forward-looking cost characteristics of certain inputs.

581

582 Q. Did all of the input changes you propose increase the universal service cost
583 results?

584 A. While many of them resulted in universal service cost or access cost increases,
585 others resulted in universal service cost or access cost decreases. In each case that
586 changes were made from the default inputs, they were made with the intent of
587 better reflecting the forward-looking costs of the IITA member companies based
588 on circumstances within Illinois.

589

590 Q. Have you prepared a description of the default inputs that the IITA has changed?

591 A. Yes. IITA Exhibit #2, Attachment #3, is a document outlining the input items
592 that the IITA changed from the default values in its development of economic

costs for this case. IITA Exhibit #2, Attachment #4, is an output report from the HAI Model showing the specific model inputs changed and the specific values used for each of these inputs. In the following section of my testimony, I will discuss in greater detail the reason for each of the changes made in the default inputs.

HAI INPUT CHANGES

Q. Would you please describe the rationale for changing the plant type assumptions as outlined in Item #1 of Attachment #3.

A. Yes. The HAI Model develops costs of distribution and feeder plant in nine different density zones. One of the series of input items in these density zones are inputs to designate the type of plant (aerial, buried or underground) that is used for feeder and distribution plant. There is a similar input for the type of plant in interoffice facilities, as well. The default inputs for these items vary between density zones based on the model developers' estimates of the type of plant built in these zones on a nationwide basis. Even in the most rural zones, the default inputs assume that a substantial amount of aerial plant will be constructed. In Illinois, based on a number of factors related to geography, weather and cost of construction, it has been standard practice in the smaller companies in the state to build buried plant for distribution plant, feeder plant and interoffice plant. As one travels through the rural areas of the state served by the small ILECs, it is relatively rare to see any aerial plant. In most areas, buried plant is used

exclusively, although there are some in-town areas where underground plant is constructed in some circumstances.

Based on these observations, the IITA has developed its costs by changing the model inputs in all appropriate places to reflect a larger percentage of buried plant as the method of outside plant construction from that used in the default assumptions. In the four lowest density zones, buried plant has been assumed to be 95% of the plant constructed, with aerial plant the remaining 5%. In the fifth and sixth zones, 85% buried, 5% aerial and 10% buried plant has been assumed. No changes have been made in the eighth and ninth density zones because none of the small company lines fall within these zones. We believe this is more reflective of Illinois circumstances than are the national default inputs.

Q. Why have you set the Fraction of Buried Plant Available for Shift parameters to zero as discussed in Item #2 of Attachment 3?

A. These inputs are included in the model to allow the model to change the assumption regarding the amount of buried plant that would be constructed, as discussed in my previous answer, based on internal cost calculations made by the model. The model would substitute aerial plant for buried, if based on model calculations, aerial plant was less expensive. The IITA is proposing that this value be set at zero so the model reflects the buried plant construction types as discussed above. Some of the factors that lead to the large proportion of buried plant construction in Illinois may not be fully reflected in the default cost

638 assumptions; and without this change, the model might not construct the full level
639 of buried plant we believe is appropriate.

640

641 Q. Item #3 of Attachment #3 discusses changes made in the structure sharing default
642 assumptions. What is meant by structure sharing?

643 A. In the HAI Model, the costs of the cable and its installation are separated from the
644 cost of the structures (poles for aerial cable, trenches and plastic tubing for buried
645 cable, and conduit for underground cable) built to "carry" the cable from one
646 location to another. The structure costs are developed using separate input
647 amounts and are calculated separately. The structure sharing assumptions are
648 built into the model to reflect circumstances where these structures may be able to
649 be used by a utility other than the telephone company; and the costs of the
650 structures may be borne by these other companies, thus reducing the effective cost
651 to the telephone company.

652

653 Q. Can you give some real world examples where structures might be shared?

654 A. Yes. The most common example is probably with the use of pole lines. In many
655 locations, particularly in town locations, one utility builds a pole line and other
656 utilities rent space on the poles to place their own facilities. Where an aerial plant
657 is used by both electric and telephone utilities, they frequently share a single pole
658 line. In addition, in many "in-town" situations, a cable TV company may also
659 place its facility on some of the same pole lines.

660

661 In some new subdivision construction, trenches dug for utilities may be shared by
662 electric, telephone and cable TV companies. When electric facilities are involved
663 in sharing of trenching, there is typically a significantly increased cost to the cost
664 of the trench to meet code requirements for separation of electric cables from
665 telephone and cable TV facilities.

666

667 In urban locations, conduit facilities may be placed to service multiple utilities in
668 order to minimize the street disruption of placing additional facilities in the future
669 and to maximize the use of below street surface land space.

670

671 Q. Can you, in general terms, describe the conceptual assumptions underlying the
672 HAI default structure sharing assumptions?

673 A. Yes. There are several key conceptual assumptions that are inherent in the HAI
674 default assumptions regarding structure sharing. First, the modelers assume that
675 not only is the telephone network being hypothetically totally reconstructed but
676 the electric, cable TV and competitive telecommunications services networks are
677 being constructed at the same time so that structure sharing of trenches, conduit,
678 etc. can take place. Second, the modelers assume that, in the future, there will be
679 high motivations for these various utilities to share structures and build facilities
680 using the same kind of plant in the same areas. Third, the modelers assume that
681 the cost of structure construction will be unchanged from typical telephone plant
682 construction even with the addition of other utility facilities associated with the
683 structure. While this may be reasonably true for aerial construction, it is not true

684 for buried construction where code requirements for buried electric service
685 requires significantly deeper construction for electric plant than for telephone
686 plant.

687

688 Q. Can you describe the specific assumptions encompassed in the HAI Model
689 regarding structure sharing for buried plant?

690 A. Yes. The HAI Model default assumptions assign 33% of the cost of the structure
691 to the telephone company for buried structures in the lower density bands. This
692 presupposes that in these density bands, buried telephone company plant will be
693 accompanied by a buried electric facility and a buried cable TV facility, with no
694 increase in the cost of the facility because of the presence of the other two
695 facilities.

696

697 Q. Do you believe this assumption is at all realistic?

698 A. No. My opinion is that it has little relationship to reality. To put this assumption
699 into perspective, let me first indicate for the four lowest density bands the size of
700 an average "lot" that would be inherent at the maximum level of the density band
701 assuming all households had equal size lots. They would be as follows:

702	Band 1	0-5 lines/sq. mile	128.0 acres
703	Band 2	6-100 lines/sq. mile	6.4 acres
704	Band 3	100-200 lines/sq. mile	3.2 acres
705	Band 4	200-650 lines/sq. mile	.98 acres

706

707 From my experience in talking with clients about their communities throughout
708 the mid-western and western parts of the country, there would be no cable TV
709 provider in at least the first two density bands; and the provision of cable TV

710 service in Band 3 areas would be spotty. There would probably be a cable TV
711 provider in many, though not all, of the Band 4 areas. However, in these areas, a
712 large portion of the cable TV is aerial and constructed using the electric poles.
713 The likelihood of the cable TV provider sharing buried structures with the
714 telephone company in any of these areas is remote.

715
716 As to the electric utilities, my experience in driving through rural areas is that
717 electric service is provided primarily by the use of aerial plant while the
718 telecommunications facilities use primarily buried facilities. My impression is
719 that there are strong economic reasons why electric plant is generally aerial while
720 the telephone plant is buried. I do not see any evidence to suggest that in rural
721 areas this difference in plant construction will suddenly change in the electric
722 industry. Thus, there is little reason to believe that there will be any appreciable
723 structure sharing with the electric industry.

724
725 Q. Based on your observations, what assumptions has the IITA proposed regarding
726 structure sharing?

727 A. Based on our perception of the limited to non-existent likelihood of sharing buried
728 structures, the IITA is proposing that the structure sharing for buried and
729 underground plant for the lower seven density zones be set at 100%, that is the
730 full cost of the buried structures are assigned to the telephone company. For
731 aerial cable, a 100% structure sharing assumption is assumed for the first three
732 zones, but a 50% assumption is used in Zone 4 and higher where telephone
733 company aerial cable, if built, frequently shares poles with the electric company.

734

735 Q. Why is the IITA proposing to change the end office switching investment input,
736 Item #4 on Attachment #3?

737 A. Our analysis indicates that the default input value is not representative of the cost
738 of end office switching equipment for small companies and small switches. The
739 default switching input value that is used by the HAI modelers is based on an
740 analysis of switch costs for larger companies (Bell Operating Companies and
741 GTE) that were publicly available. The input value is used in a fairly straight line
742 formula based on number of lines. In viewing results of the default analysis, it is
743 clear that the input does not correctly estimate the cost of switching for small
744 offices.

745

746 We also did an analysis comparing the default model results with the actual
747 investments incurred by companies for COE switching in Illinois. With the
748 default inputs, the COE switching investments produced by the HAI Model were
749 slightly more than 50% of actual COE switching investments for the small Illinois
750 companies. I believe that is a strong indicator that the default input is generating
751 inappropriate results for these companies.

752

753 Q. Are comparisons between model results and actual investments and expenses
754 always an appropriate test of the model results?

755 A. No, not always. Since the model is developing a cost for a forward-looking
756 network, comparisons would not be valid if the network elements being
757 developed are of a different design than that actually being used. Since the model

758 is generating forward- looking costs, there may be differences between the
759 model and actual results because of differences in cost (either up or down) when
760 actual plant was purchased as compared to the forward-looking cost of the plant.
761 There may also be differences between costs developed by the model and actual
762 costs because the model does not develop costs for all of the functions that an
763 actual company may be performing. In making comparisons between model
764 results and actual results, all of these factors need to be taken into account.

765
766 Q. What is your assessment of the validity of comparing the cost of central office
767 switching equipment from the model to actual costs?

768 A. This is one area where I believe comparisons are relatively meaningful. If one
769 reviews the forward-looking technology for switching, one finds it includes
770 digital central office switches, both host and remote, that are generally equipped
771 with currently required functions and features including SS7 signaling capability.
772 When one reviews the switching equipment actually in use in the small Illinois
773 companies, one finds digital central office switches, both host and remote, that are
774 equipped with these features and functions. These switches include such recently
775 required capabilities as interchangeable NXX codes, four-digit CIC code
776 capability, intraLATA presubscription, and in most cases, SS7 signaling.
777 Companies will be upgrading the switches during the coming year to provide
778 features required by the Communications Assistance for Law Enforcement Act
779 ("CALEA").

780

781 Most of the small companies in Illinois are using at least their second generation
782 of digital switching equipment. The equipment is relatively new (probably on the
783 average between four and eight years old) and has been upgraded since
784 installation, as needed. While it is generally believed that the cost of switching
785 equipment has been falling over time, the falling costs of hardware have been at
786 least partially offset by increasing costs of switching software. Overall, it is my
787 belief that the model costs for forward-looking COE switching equipment should
788 be relatively close to, though possibly somewhat less than, actual costs. In my
789 mind, the nearly 50% difference between the model and actual costs for this
790 equipment indicates that the model costs do not truly reflect the forward-
791 looking costs of this equipment.

792

793 Q. What are you proposing as the default input for central office switching
794 investment?

795 A. The default input for this value is \$416.11 per line. Based on my review of this
796 factor and the resulting investment to actual investments, I am recommending that
797 the value be increased to \$658.25 per line. Using this value, the COE switching
798 investment for the Illinois companies produced by the model results in an amount
799 approximately 94.5% of the actual investment in 1998.

800

801 Q. Why have you increased the input value related to the percent of interLATA and
802 intraLATA traffic switched at the tandem switch as indicated in Item #5 of
803 Attachment #3?

804 A. The default value for this input is 20%, indicating that 20% of interLATA and
805 intraLATA traffic is switched at a tandem switch and 80% of the traffic is trunked
806 directly from an end office to an interexchange carrier. While I can't comment on
807 the validity of the assumption on a nationwide basis, for the small Illinois
808 companies, a large portion of their interLATA and intraLATA traffic is switched
809 through a tandem switch rather than being trunked directly from an end office to
810 an interexchange carrier. In some cases, interexchange carriers do have direct
811 trunk groups to individual small Illinois companies. An analysis of a number of
812 the companies indicated that about 10% of the traffic for those companies was
813 carried on direct trunks. The value for these inputs have, therefore, been changed
814 to 90%.

815
816 Q. Can you please explain your rationale for changing the default assumption related
817 to Item #6, on Attachment #3, the percent of Total Interoffice Traffic Fraction?

818 A. Yes. This factor estimates the total portion of the traffic originated in the central
819 office that has to be switched to a second switching site for termination of the
820 traffic and is a significant factor in developing the cost of interoffice facilities. It
821 is also used in conjunction with estimates of toll traffic to determine the portion of
822 local traffic that is switched on an interoffice basis and impacts the cost of local
823 service. For large urban companies, this may represent traffic that is switched
824 between multiple wire centers in a single exchange. For rural companies, it
825 would represent traffic that is commonly designated as Extended Area Service
826 ("EAS") traffic that is switched between exchanges. Using the default

827 assumptions, the model estimates that 48.69% of local traffic is interoffice traffic
828 and develops and assigns costs to the USF cost to account for this usage.

829
830 Based on a review of data from a majority of the small cost study companies in
831 Illinois, we have determined that approximately 22% of their local traffic is EAS
832 traffic. We have thus reduced the default total interoffice input percent from 65%
833 to 45%. This produces a revised local interoffice traffic percentage of 19.4%, a
834 value much more representative of small Illinois company operations. The results
835 of this change are to significantly reduce the USF cost developed by the model.

836
837 Q. Do you agree with the default assumptions that develop the cost of capital as
838 indicated in Item #7 of Attachment #3?

839 A. No. I believe the cost of capital assumptions in the default scenario are not
840 appropriate. The default assumptions assume a 55% equity/45% debt ratio with a
841 cost of debt and equity generating an overall cost of capital of 10.01%.
842 Generally, the small companies in Illinois have equity/debt ratios that are higher
843 than the default assumption and higher than the larger companies in Illinois. In
844 discussions with the ICC Staff regarding the earnings analysis to be included in
845 this case, the Staff and the IITA have agreed to use a cost of capital that reflects a
846 debt/equity ratio of 40%/60%, a current cost of debt of 9% (pre-tax) and a cost of
847 equity of 15.0% for the majority of the small companies. Use of these ratios
848 provides an overall cost of capital of 12.6%. For the Frontier companies, a cost of
849 equity of 13.8% was used. The lower cost of equity for Frontier recognizes that it

850 has greater access to capital markets at a national level giving it greater liquidity
851 and thus a lower cost of equity.

852

853 Q. Item #8 on Attachment #3 discusses changing the default factor for Network
854 Operations Expense. Would you discuss why you are proposing a change in this
855 item.

856 A. Yes. Network Operations Expense encompasses the following accounts in the
857 Uniform System of Accounts:

858	Network Operations Expense	6530
859	Power Expense	6531
860	Network Administration Expense	6532
861	Testing Expense	6533
862	Plant Operations Administration Expense	6534
863	Engineering Expense	6535

864

865 Expenditures in these areas for small companies differ significantly from larger
866 companies. For example, the plant administration expense account includes the
867 cost of overall supervision of plant operations, including overall planning,
868 developing methods and procedures, developing plant training and coordinating
869 safety programs. The account excludes immediate or first level supervision which
870 is included in the plant specific accounts. In most small companies, the second
871 level of supervision is the company manager, consequently, most small
872 companies have very little plant administration expense. Engineering expense is
873 generally less in small companies since most engineering is on a specific project
874 basis rather than of a general nature. Network administration activities in small
875 companies do not include extensive network control facilities because their
876 networks are limited.

In the HAI Model, Network Operations Expense is generated based on a composite level of expenses for the ARMIS reporting companies on a per line basis. The model then multiplies this expense level by the Network Operations Expense factor to arrive at a final estimate of Network Operations Expense. The HAI modelers in the default assumptions have assigned this factor a 50% value, essentially indicating that forward-looking Network Operations Expenses would/should be half of the current level. Their rationale for doing this is summarized as follows:

"....these costs are artificially high because they reflect antiquated systems and practices that are more costly than the modern equipment and practices that the HAI Model assumes will be installed on a forward-looking basis. Furthermore, today's costs do not reflect much of the substantial savings opportunities posed by new technologies, such as new management network standards, intranets, and the like."

Because small companies have very different circumstances and do not have many of the systems typical in large companies, it is our belief that the types of forward-looking savings the modelers are anticipating for large companies will not, nor cannot, be achieved in small companies. We are, therefore, proposing that the Network Operations Expense factor be set at 100% rather than 50%. Use of this factor produces modeled Network Operations Expenses that are somewhat less than, but relatively close, to the expenses currently encountered by the small Illinois Companies.

Q. Please describe the changes you made in local number portability cost as described in Item #9, Attachment #3.

903 A. The default inputs assume a cost of \$0.25 per line per month to recover the cost of
904 implementing local number portability. Since none of the small Illinois
905 companies have implemented this function, we have reduced this input to zero.
906 This reduces the calculated USF cost by a similar amount per line.

907
908 Q. Item #10, Attachment #3, describes changes in the Billing and Bill Inquiry input.
909 Would you please describe this input in great detail and your rationale for
910 changing it.

911 A. Yes. This input is intended to capture the customer operations costs of providing
912 local service billing, collecting, bill inquiry and other inquiries regarding the
913 provision of service. The provision of these services differ in a number of
914 respects between large and small companies. Many of the customer contact
915 functions for large companies are performed in centralized centers by relatively
916 large work groups. With these work group sizes, there may be opportunities to
917 adjust the work group to fluctuating workloads on an hourly or daily basis.
918 Billing functions are typically spread throughout the month with multiple billing
919 cycles. Typically, the data processing and bill processing functions are performed
920 with in-house computer assets and in-house personnel.

921
922 In small companies, these functions are generally performed by only a few
923 individuals with staffing required during the normal business hours to provide
924 service availability to customers. There are relatively few opportunities to adjust
925 work group levels to variations in the customer contact workload. Billing is
926 typically performed once a month so there are greater variations in the work flow

927 than in larger companies. Oftentimes, service bureaus are used by small
928 telephone companies, at a minimum, to provide software support and often
929 provides full bill processing functions using investments made by the service
930 bureau. Thus, the expense and investment levels of small companies may vary
931 significantly from larger companies.

932 In order to test the validity of the default assumption, GVNW undertook a study
933 of the customer service expenses of a number of its cost study clients to separate
934 the costs associated with local services and billing from those associated with toll
935 and carrier billing functions. Using cost study information from separations
936 studies, which separate such expenses into a number of different categories by
937 work functions, GVNW developed an average cost per line for those companies
938 of the local billing functions. The results of that study indicated a \$3.62 cost per
939 line for the local billing and customer contact functions. We believe this result is
940 more representative of the cost of these functions in small Illinois companies and
941 have thus incorporated this estimate in the economic cost studies we have
942 performed.

943
944 Q. Item #11, in Attachment #3, relates to carrier-to-carrier billing costs. What is
945 your rationale for changing the default level for this item?

946 A. Carrier-to-carrier billing costs include the ongoing cost of responding to IXO
947 service change requests and the cost of rendering Carrier Access Billing System
948 ("CABS") bills to individual carriers for their use of the local exchange network
949 in providing toll services. These bills are rendered at an individual wire center
950 level to each interexchange carrier, mostly on a monthly basis. With average wire

951 center sizes for the small companies at a significantly smaller level than the
952 average for large Bell Operating Companies, it is not surprising that the cost of
953 this function is different for small companies.

954

955 The default input for this item is \$1.69 per line per year. A study of these costs
956 using data available from a group of the Illinois cost companies' cost separations
957 studies indicated that, on average, these costs are \$16.83 per line per year. This
958 value has been used as the input for this cost item. Within the model, this value
959 only impacts the costs of the access elements and does not affect the local service
960 cost.

961

962 Q. Item #12, Attachment #3, describes changes in the model inputs for central office
963 switching and transmission expense. Please describe the derivation of the default
964 input values and the values that the IITA has used in its development of forward-
965 looking costs.

966 A. In developing expenses for most of the plant specific expense categories, the HAI
967 Model uses recent ARMIS data from around the country to develop ratios
968 between current expenses and investments as a basis for developing projected
969 forward-looking expense levels. However, in the case of central office switching
970 and transmission expense, this data is overridden by two alternative expense
971 ratios, one for each investment category. The input levels for these items are
972 based on a 1993 incremental cost study performed by New England Telephone

Company in New Hampshire and are considerably lower than current levels experienced even by the Bell Operating Companies.

The IITA inputs are developed based on current ratios of expenses to investment for these expense/investment categories for the small Illinois telephone companies. Since the type of investment included in these accounts is generally reflective of forward-looking technology, it is reasonable to expect that the ratios currently experienced by the Illinois companies are reflective of the forward-looking costs they can expect to experience.

ECONOMIC COST STUDY RESULTS

Q. Using the input changes you have described plus the default inputs for the remaining items, have you completed "economic cost" studies using the HAI 5.0a Model for each of the small companies in Illinois?

A. Such studies have been completed under my direction. The results of these studies are summarized in IITA Exhibit #1, Attachment #5. Attachment #5 shows that the monthly USF cost per line varies from a level of \$47.76 to \$273.89 for the individual companies. The weighted average of these costs across all the companies (using actual company access lines) is \$91.67. The weighted average cost is the proxy cost, as that term is used in the statute for the total group of companies.

AFFORDABLE RATE

1000 Q. Have you developed a proposed "affordable rate" for each of the companies?
1001 A. Yes, that has also been developed under my direction. Since the time for
1002 preparation and prosecution of this case is limited and because the proposal for
1003 IUSF funding is ultimately limited by the individual companies' earnings levels
1004 on an embedded cost basis, the IITA is proposing that the "affordable rate" be
1005 established at the minimum level allowed by the statute--the current rates that are
1006 in effect. This will provide a rate within the limits of the statute but will avoid the
1007 necessity for a prolonged discussion of alternative methods of determining an
1008 "affordable rate". The IITA's proposal is specifically that the affordable rate be
1009 established at the current rate level for basic service (including any state carrier
1010 common line surcharge rates and EAS rate elements) for the class of service being
1011 considered plus any additive rates for touch calling service. To simplify the
1012 calculation in my Attachments, the level displayed is the weighted average rate
1013 for residential and business service.

1014
1015 Q. The statute requires that before a company may receive support from an IUSF, the
1016 company must demonstrate that the economic cost is greater than the affordable
1017 rate. Have you demonstrated this for each of the companies?

1018 A. Yes, in two different ways. First, in this case, the individually calculated proxy
1019 cost for each company exceeds the proposed affordable rate for that company. In
1020 addition, the weighted average proxy cost for the combined companies is greater
1021 than the weighted average affordable rate for the combined companies, thus
1022 demonstrating that the statutory test has been met.

1023

1024
1025 **DETERMINING LEVEL OF SUPPORT**
1026

1027 Q. The statute requires in determining the level of support to be received that federal
1028 support funds received by the companies must be taken into account. Have you
1029 performed this analysis?

1030 A. Yes, IITA Exhibit #2, Attachment #5, displays the calculation of support amounts
1031 using the economic costs that have been developed, the proposed affordable rate
1032 and the federal support fund received by the companies.

1033
1034 Q. Could you explain Attachment #5 in greater detail.

1035 A. Yes. Using the actual company access lines and the difference between the
1036 economic cost and affordable rate developed in Attachment #5, I have calculated
1037 the total potential annual support amount. I have then subtracted from that the
1038 federal support funds received by the company to arrive at the IUSF eligibility
1039 amount based on an individual company cost determination.

1040
1041 Q. Please describe in greater detail the amounts included as federal support funds?

1042 A. These amounts are calculated from three different sources. First, at the federal
1043 jurisdiction, 25% of local loop costs are assigned to the carrier common line
1044 (CCL) revenue requirement for cost settlement companies with an equivalent
1045 amount being assigned for average schedule settlement companies. Funding for
1046 this CCL revenue requirement comes at the federal level from several different
1047 sources. These include the federal end user common line charge, or EUCL,
1048 carrier common line charges billed to interexchange carriers, the long-term
1049 support portion of the federal USF, and net settlements with the National

1050 Exchange Carrier Association's CCL pool (either positive or negative) to equal
1051 the CCL revenue requirement. The amounts included for the CCL revenue
1052 requirement are the latest estimates of 2000 actual amounts. Second, many
1053 companies receive federal high cost loop support from the federal USF. These
1054 amounts have been included as federal support amounts by annualizing the Fourth
1055 Quarter, 2000 amounts posted by the Universal Service Administration Company
1056 ("USAC") on their web page. Third, all the small Illinois companies receive
1057 federal local switching support from the federal USF. These amounts have also
1058 been included by annualizing Fourth Quarter, 2000 estimated amounts posted by
1059 USAC on their web page.

1060

1061 Q. Can you summarize the results of Attachment #5?

1062 A. Yes, on an individual company basis, all but four of the companies show some
1063 level of need for state USF funding. Using the statutory proxy cost criteria, in
1064 summary, the analysis shows a potential IUSF funding support requirement of
1065 over \$73 million for the Illinois small companies as a group. This demonstrates
1066 that the "economic cost" substantially exceeds the proposed affordable rate and
1067 the federal support for the companies as a whole. It further demonstrates that
1068 using the proxy cost approach as contained in the statute, the small Illinois
1069 companies, as a group, would be eligible for receiving that amount of IUSF
1070 funding and that each company should be eligible for such funding.

1071

1072 Q. Is the IITA proposing that this full funding eligibility be implemented in 2001 or
1073 in the future?

1074 A. No, it is not. The results of developing the economic cost for the companies,
1075 using the forward-looking model and making the other adjustments as required by
1076 the statute, produces a result which is well beyond the needs of the small Illinois
1077 companies in total. These results emphasize the potential discontinuity between
1078 forward-looking costs and the actual embedded costs of the companies. In
1079 addition, as discussed earlier in my testimony, results of this analysis, when
1080 compared with the analysis that will be presented hereafter, shows the
1081 discontinuity that can result for individual companies because of the infirmities of
1082 the forward-looking models and techniques.

1083

1084 As discussed subsequently in my testimony, the rate-of-return showing required
1085 by the Commission will determine the size of the fund, the companies qualifying
1086 for IUSF support and the amount of the support on an individual company basis.
1087 That limitation makes the HAI results virtually meaningless but for the "economic
1088 cost" requirements of the statute for the Illinois small companies as a group. In
1089 any event, the Commission, the Hearing Examiner and all parties should
1090 understand that the IITA is not advocating the creation of an IUSF in the amount
1091 set forth on Attachment #5.

1092

1093 Q. What additional steps is the IITA proposing should be taken in determining the
1094 funding to be provided by the IUSF?

1095 A. In its November 21, 2000 Order in these dockets, the Commission expressed its
1096 intent that IUSF funds should not be provided to companies until some type of
1097 showing is made that the company is "in need" of receiving such funding. The

1098 clear intent of the Order was to include an evaluation of a company's current
1099 earnings position, without IUSF funding, to see whether the company needs such
1100 funding to maintain an appropriate earnings level. While such a requirement is
1101 clearly not included within the statutes dealing with the IUSF, the IITA
1102 understands that such a test will be conducted to determine the level of IUSF
1103 funding a company can receive. This is being done to comply with the
1104 Commission's expressed desires and to provide the information the Commission
1105 has indicated it needs in order to implement an IUSF.

1106
1107 Q. How will this be done?

1108 A. The IITA and the Staff have held extensive discussions to develop a simplified
1109 process for conducting such an analysis within the time constraints of this
1110 proceeding. As a result of these discussions, the IITA and the Staff are near
1111 agreement on a simplified filing process and form based primarily on data
1112 available from a company's annual financial report that will demonstrate the
1113 funding need a company may have for IUSF funding to maintain a reasonable
1114 rate-of-return. The IITA and Staff have also arrived at an agreed upon rate-of-
1115 return for the small companies to use for this determination.

1116
1117 Q. Can you describe the general process being discussed by the Staff and the IITA.

1118 A. Yes. The process and form that have been agreed to is the development of an
1119 individual company revenue requirement based on a simplified procedure which
1120 is contained in the form developed by the two parties. Generally, it is based on
1121 actual total company 2000 financial results as reported to the Commission on

1122 Form 23A or other suitable annual financial reports acceptable to the
1123 Commission. Included in the form are the opportunity to make certain
1124 adjustments to the results to reflect known changes to the financial results. The
1125 form also includes an adjustment to remove the support amounts received during
1126 2000 from the IUSF and from the DEM Weighting Fund. The form compares the
1127 company's embedded cost revenue requirement with the return level agreed to
1128 between the Staff and the IITA and calculates the funding needed from the IUSF
1129 in the future to achieve this reasonable return. That amount would be the amount
1130 of IUSF funding that the company would be entitled to under the new IUSF fund.

1131 Q. You indicated that there is an agreement between the Staff and the IITA regarding
1132 the return on rate base level that should be used in making this calculation. Can
1133 you describe that agreement.
1134

1135 A. Yes. The IITA and Staff discussed the major elements that go into determining a
1136 rate-of-return on rate base. Because of the limited time to complete this
1137 proceeding before the DEM Weighting Fund expires, the two parties agreed that it
1138 would be prudent to arrive at a rate-of-return that could be used for all the
1139 companies based on general financial parameters rather than detailed studies of
1140 each company's specific circumstances. After a number of discussions, the two
1141 parties agreed upon a set of factors that would be used to determine the rate-of-
1142 return. These included a hypothetical capital structure of 40% debt and 60%
1143 equity, a current cost of long term debt of 9% based on current Rural Telephone
1144 Finance Corporation quoted lending levels, and a cost of equity of 15% and
1145 13.8% for the non-Frontier small companies and Frontier companies respectively.

1146 It was also agreed that since the form developed to evaluate the earnings did not
1147 include interest cost in the calculation of income taxes that an after tax cost of
1148 debt would be used in calculating the overall rate-of-return to be used in the
1149 earnings analysis form.

1150
1151 Q. How do you see this analysis being presented in determining the IUSF funds that
1152 should be provided to the small companies under the new IUSF?

1153 A. It is my understanding that each of the companies that desire to receive funding
1154 from the new IUSF would need to complete the earnings evaluation form and
1155 demonstrate that on an embedded cost basis their earnings, absent the receipt of
1156 the current IUSF and DEM Weighting Funds they receive, would be less than the
1157 agreed upon overall rate-of-return. Such companies would be eligible to receive
1158 IUSF from the new fund sufficient to bring them to the agreed upon earnings
1159 level.

1160
1161 Q. Are you presenting evidence regarding the companies who will be requesting
1162 IUSF from the new fund and the overall amount of the fund?

1163 A. Not at this time. The agreed upon procedure is based upon the annual financial
1164 report to the Commission. In order to provide the latest available data, the parties
1165 have agreed to a procedural schedule, which would have this data filed on April
1166 20, 2001, shortly after many companies file Form 23A with the Commission. The
1167 earnings analysis can thus be based on year 2000 data. Individual companies
1168 eligible for and desiring to request funds from the new IUSF will be submitting

1169 the appropriate data in an April 20, 2001 filing in these dockets. I will be
1170 providing a summary of the requested amounts at that time.

1171
1172 Q. I presume then that you cannot provide any hard data at this time on the size of
1173 the new IUSF fund. Do you have an idea regarding the potential size of the fund?

1174 A. While you are correct that I do not have hard data at this point in time, some
1175 preliminary analysis was done using 1999 data and an earnings evaluation process
1176 similar to that agreed upon with the Staff. Based on that analysis, I expect that
1177 while many companies will be requesting IUSF funding, others will probably not.
1178 Furthermore, based on that analysis, I would anticipate that the requested funding
1179 will be less than the current IUSF funding levels.

1180

1181 Q. Are there actions during the duration of these dockets that could change this
1182 analysis?

1183 A. The primary thing I can think of would be a significant change in the companies'
1184 access rates as a result of the current policy of mirroring federal rates combined
1185 with some significant change in federal access policies. Currently, the FCC has
1186 under consideration two major proposals that could cause significant changes in
1187 federal access rates. Both the RTF Recommendation and the Multi-Association
1188 Group ("MAG") proposals before the FCC contain provisions for reducing federal
1189 access charges with an offset to the lost access revenues from increases in federal
1190 universal service funds. Should either of these proposals be adopted with a
1191 resulting significant reduction in federal access charges and with intrastate access
1192 rates reduced pursuant to the current mirroring policy, companies' earnings levels

1193 could be significantly impacted. While I do not anticipate this occurring before
1194 the April 20, 2001 filing date, there is a good possibility that the FCC's review of
1195 the RTF Recommendation will be completed while these dockets are in progress.

1196
1197 Q. Is the IITA concerned about the potential impacts that such changes could have
1198 on the small Illinois telephone companies?

1199 A. It certainly is. Consideration has been given and discussed with the parties on
1200 how best to address this issue in Illinois. There has been no agreement regarding
1201 the best way to do that, although several parties have expressed significant
1202 concerns about addressing it in these dockets. The IITA is not specifically
1203 addressing a proposed solution to this potential problem at this time and is
1204 continuing to consider how it should be addressed before the Commission. The
1205 IITA does, however, want to put both the Commission and the parties to this case
1206 on notice that if such a change in state access charges would result from changes
1207 in federal access rate policies, the resulting financial impacts, using the
1208 procedures discussed above to determine the IUSF funding in response to
1209 expressed policies of the Commission could directly impact the future size of the
1210 IUSF and/or require a different solution.

1211
1212 Q. Once the IUSF funding amounts are developed in this proceeding, does the IITA
1213 have recommendations as to how often these amounts should be reviewed?

1214 A. Yes. We would recommend that, in general, they be reviewed relatively
1215 infrequently, such as on a three to five year timetable. This will limit the
1216 administrative and litigation costs that could be involved in a more frequent

1217 update process. It would provide stability to the companies and an environment
1218 favorable to investment in new facilities since revenue streams would be stable
1219 over a mid-range time period. For the payers into the fund, it would provide
1220 relative stability in the amount of funding that would be required and would also
1221 limit the administrative and litigation costs associated with maintaining the fund.

1222
1223 Q. Are you proposing that the fund be frozen during this three to five year time
1224 period?

1225 A. No. Since the funding is being limited to amounts necessary to achieve a
1226 reasonable rate-of-return, if industry policy changes at either the state or federal
1227 level cause changes in the companies' revenue streams, this proceeding should be
1228 reopened or a further proceeding should be held to evaluate future IUSF funding
1229 in light of the changed circumstances. A significant change in state access rates
1230 as a result of changes in federal or state access rate policies could trigger such a
1231 reevaluation, for example.

1232
1233 Individual companies may have changes in circumstances impacting their overall
1234 earnings during this time period that would provide an appropriate rationale for a
1235 company on an individual basis to seek a modification in USF funding. In light of
1236 the rate-of-return constraint being imposed in this proceeding, the companies so
1237 affected must have the right to make the necessary filings to have their change
1238 and circumstances addressed. I would contemplate that such a request would be
1239 conducted before the Commission in a manner that would allow all affected

1240 parties to participate with regard to the determination of the companies' IUSF
1241 needs and the overall impact on the IUSF funding.

1242

1243 **IMPLICIT SUBSIDY REQUIREMENT**

1244

1245 Q. You indicated earlier that the statute contains a requirement for determining
1246 implicit subsidies, specifically, that any subsidies in interexchange carrier access
1247 rates should be identified before implementing an IUSF. How do you interpret
1248 this requirement?

1249 A. I believe it means that the IITA must identify such subsidies, if any, that are
1250 contained in their interexchange carrier access rates. Such an identification can
1251 be made by comparing the current revenues with the "economic cost" of the
1252 interexchange carrier access rates. If the current revenues are equal to or less than
1253 the economic cost, there clearly would be no such implicit subsidy within those
1254 rates. If the current revenue is greater than the "economic cost", there would be
1255 concerns as to whether the rates do, in fact, contain a subsidy.

1256

1257 Q. Have you such an analysis to present?

1258 A. Yes, I do. This analysis has been prepared using the same "economic cost"
1259 studies that were prepared to develop the economic cost of the supported
1260 universal services. As part of the HAI Model output file, there is a "cost detail"
1261 tab that includes calculations of IXC switched access rates. The analysis I will
1262 present has been developed using the end office switching, ISUP (SS7) signaling,
1263 dedicated transport and common transport elements developed in the HAI Model.
1264 These rates have been multiplied by actual 2000 intrastate access minutes to

develop the economic cost for access and compared to the intrastate access revenues received for those same minutes. The analysis is presented in IITA Exhibit #2, Attachment #6. On an individual company basis, the schedule indicates that a majority of the companies' access rates contain no subsidies. However, for a number of companies, the current revenues are greater than the "economic cost" developed for that company through the HAI model process. While this suggests concern that the rates might contain some subsidies, it does not, by any means, fully demonstrate that. Additional studies to show the stand alone cost of these services would be needed to fully identify whether there are subsidies in these rates. The IITA has not conducted such studies, and believes that they are unnecessary due to the proxy cost provisions of the statute. The Attachment shows that in summary, for all the companies, the economic cost of access, as developed by the HAI Model, are higher than the current access revenues for the companies as a whole. This demonstrates that there is no implicit subsidy, in total, in the access rates of the small Illinois ILECs, thus meeting the statutory test.

FUNDING MECHANISM

Q. What are the statutory requirements regarding the funding mechanism?

A. The statute requires that the funding for the IUSF be recovered from all interexchange carriers and local exchange carriers certificated by the Commission in a competitively neutral manner.

1289 Q. Does the IITA have a proposed method for assessing the funds against these
1290 carriers?

1291 A. No. The IITA is aware of the sharp debate that took place in Phase 1 of this
1292 proceeding between Ameritech and Verizon, on one hand, and AT&T and the
1293 other interexchange carriers, on the other hand, regarding funding methodologies.
1294 The IITA believes that these parties can articulate the two major approaches to
1295 funding as they did last time and give the Commission information needed to
1296 distinguish between these two major methodologies.

1297 Q. If the Commission gives consideration to the approach proposed by AT&T in the
1298 previous phase of this proceeding (a surcharge on end user revenue), are there
1299 features of such an approach that the IITA believes are important?
1300

1301 A. Yes, the IITA believes that the basis for funding should be the intrastate end user
1302 retail revenues of the certificated carriers described in the statute under this
1303 general approach. Use of end user retail revenues is much fairer to the end users
1304 of the various carriers than the method proposed in the previous phase by
1305 MCI/WorldCom, the use of total revenues less payments to other carriers. The
1306 IITA would also recommend under this type of approach that the funding be
1307 based on current revenue levels rather than prior year levels. The use of current
1308 revenues allows the carriers to apply the surcharge level determined by the
1309 Commission directly to end user revenues without the necessity of making
1310 adjustments to account for changes in revenue levels between the assessment
1311 period and the collection period. The IITA would also recommend under this
1312 type of approach that the revenue base, against which the assessment is applied,

excludes any revenues collected to fund the IUSF. The fund administrator should, as part of its duties, determine the total funding basis from the certificated carriers and an assessment rate to be applied to the funding basis in order to generate the required support funds. This rate should be reviewed and approved by the Commission. As circumstances change, the administrator should propose changes to the assessment rate, as needed, to continue an adequate and appropriate level of funding.

FUND ADMINISTRATION

Q. Does Section 13-301(d) contain any specifications regarding the fund administrator?

A. No, it does not. The IITA believes, though, that it would be appropriate for the administrator of the Section 13-301(d) fund to be a neutral third party administrator as is required in Section 13-301(e). To facilitate initial implementation of the fund in the very short time that will be available, the IITA recommends that the ISCECA be appointed as the initial administrator of the fund.

IMPLEMENTATION/TRANSITION ISSUES

Q. Does the IITA have concerns regarding the anticipated transition between the current IUSF and DEM Weighting Funds and the new IUSF fund?

A. We do. Pursuant to the Commission's Order in Docket No. 98-0679, the DEM Weighting Fund will terminate no later than September 30, 2001. The current procedural schedule in these proceedings anticipates a Commission Order

1339 sometime in September, 2001, only a few days before the DEM Weighting Fund
1340 terminates. Depending on the decisions made by the Commission in that Order,
1341 there will be very little time to effect implementation in order for funding to the
1342 new fund recipients to commence in October, 2001.

1343
1344 Q. What are some of the factors that could impact the ability to implement the Order
1345 quickly?

1346 A. The funding method chosen would have a significant impact. If a new funding
1347 methodology is chosen, it may take time to gather data both in regard to the
1348 funding base and to the level of funding required to calculate funding assessment
1349 levels. If funding is based on an end user surcharge, it takes time to implement
1350 such charges in billing systems, to await the payment of funds to the company and
1351 to effectuate payment from the companies to the fund administrator in order for
1352 the administrator to have funds available to make disbursements. Depending on
1353 the Commission's decisions, these steps will not necessarily be able to be
1354 completed in just a few days.

1355
1356 Q. Have the parties discussed steps that could be taken to alleviate this concern?

1357 A. In the workshop held on March 9, 2001, the parties did discuss this concern and
1358 agreed to hold a further workshop in June to attempt to address this issue and
1359 minimize the problem. The IITA encourages this process and will fully
1360 participate in it. However, it may be that the best efforts of the parties can only
1361 somewhat shorten the implementation period, not completely eliminate it. If that

1362 is the case, there may be other steps necessary in order to avoid a discontinuity of
1363 funding.

1364 Q. Does the IITA have any specific proposals at this time to deal with this potential
1365 problem?
1366

1367 A. No, it does not. However, the IITA feels that it is important to put the parties and
1368 the Commission on notice that this transition problem could occur and to alert
1369 them that some type of temporary measures may need to be adopted to address
1370 this concern.

1371 Q. Could you summarize your testimony, please.
1372

1373 A. Yes. Pursuant to an Order of Commission, the Illinois DEM Weighting Fund will
1374 terminate no later than September 30, 2001. Current recipients of support from
1375 this Fund and the current IUSF will experience substantial losses of revenue
1376 unless that funding is replaced by the proposed new IUSF. The IITA has
1377 presented evidence to support the development of an IUSF under the provisions of
1378 Section 13-301(d) of the Act and to meet the requirements imposed by that
1379 Section. The IITA respectfully requests that the Commission approve the
1380 implementation of an IUSF as proposed so the Fund can be implemented effective
1381 October 1, 2001.

1382

1383 Q. Does this conclude your testimony?

1384 A. Yes, it does.